



Magnolia VFD
 18215 Buddy Riley Boulevard
 Magnolia, TX 77353
 (281) 356-3288
 Chief: Gary Vincent



General Contractor
LDF Construction, Inc.
 Spring, TX 77388

Magnolia, TX Floor Case History
Magnolia Volunteer Fire Department



Fire Station under construction / dumpster / construction trailer, etc. about to be moved / Fire Station to open in July, 2010.



Magnolia, Texas is located at the junction of Farm Roads 1774 and 1488, twenty miles southwest of Conroe, Texas and 40 miles west of downtown Houston, Texas. The greater Magnolia area spans roughly twelve miles in all directions, with a population of more than 65,000.

The **Magnolia Volunteer Fire Department (MVFD)** provides emergency services to more than just the city of Magnolia, it responds to calls throughout Montgomery County. **MVFD** provides emergency service to a 320 square mile area and is one of the largest Insurance Service Organization Class 3 fire departments in the nation.

Moving to a new location became mandatory after the Texas Department of Transportation revealed plans to widen FM 1774, which would have put the roadway within two feet of the current headquarters. The new **28,000 square foot** facility started construction in the summer of 2009. According to **Chief Gary Vincent**, the facility has been in the works for “several years” and will be the central headquarters for all Magnolia volunteer fire stations and the main storage facility for fleet vehicles. The new facility will feature a central training center, a maintenance facility for repairs, a central storage area, storage for self-contained breathing apparatus systems and a weight training facility exercise room. It will also have – in the event of an emergency or failure of the radio system – a backup radio system capability for dispatch.



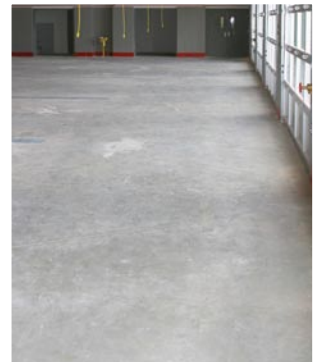


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Magnolia Volunteer Fire Department Magnolia, TX **Floor Case History**



Floor at project start 6/16/2010



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General preparation for the polishing process: hand grinding, diamond polishing edges, and starting the "first" polishing steps - 100 grit.



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Polished concrete fits the philosophy of “Building Green,” and is an ideal choice when refurbishing, or creating beautiful flooring in a wide variety of buildings. Simply put, polishing concrete is similar to sanding wood. Heavy-duty machines [weighing over six hundred pounds] equipped with progressively finer grits of diamond-impregnated segments or disks (like different grits of sandpaper) are used to gradually grind down the surface to the desired degree of smoothness. The process begins with the use of coarse diamond segments bonded in a metallic matrix. Then finer grits of polishing disks (a process called lapping) are used until the floor has the desired sheen. By polishing concrete with diamond tools, the finish is unlike any other floor surface (it creates a good balance between beauty and practicality!).

The finish “polisher” we will use



BMG 535
SASE COMPANY
KENT, WA 98032



Project mobilized / started Wednesday 6/16/2010



Photographs of the initial cleaning



The start of the diamond polishing / “lapping” process 100 grit



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The 400 and 800 grit



Final burnishing step

TIME LINE / WORK SCHEDULE		
Wednesday	6 /16/10	Setup / Initial Floor Preparation / Cleaning
Thursday / Friday	6/17/ 10 - 6/18/10	Initial Lapping step (polishing) / 100 grit* / Application of D7939 Densifier
Saturday / Sunday	6/19/10 - 6/20/10	Second / Third Lapping Step / 200/400 grit*
Monday / Tuesday	6/21/10 - 6/22/10	Second Application of D7939 Densifier / Fourth Lapping Step / 800 grit*
Wednesday	6/23/10	Fifth Lapping Step - High Speed "Burnish" with 800 grit diamond pad/ FinalDetails
Thursday	6/24/10	Clean-up / Depart

*Using diamond-impregnated segments and disks (like different grits of sandpaper).

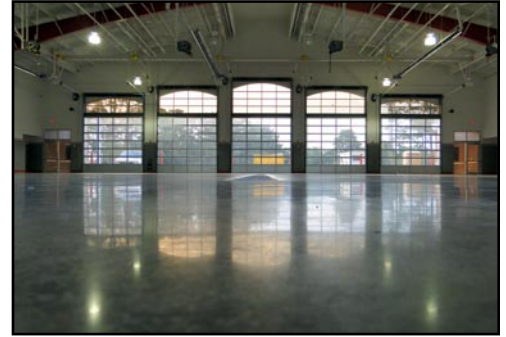
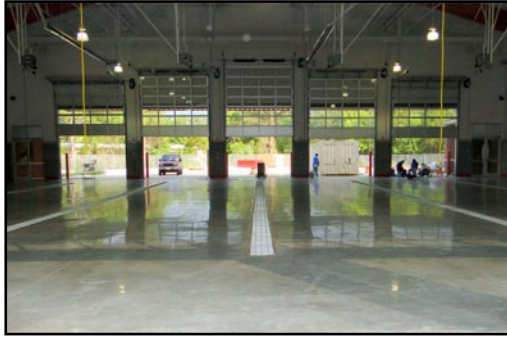


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Magnolia Volunteer Fire Department Magnolia, TX Floor Case History



Finished Floor 6/23/2010



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Magnolia Volunteer Fire Department Magnolia, TX Floor Case History

REDFORD Corporation

Congratulations!

The floor in your facility has been treated with **D7939 Densifier** (Sodium Methyl Silicate based), the concrete industry's best generic type concrete surface densifier, sealer, and hardener. **D7939 Densifier** gives an unequalled combination of long life, good looks, and low cost maintenance. Here are a few simple tips to keep your floor looking its best and lasting its longest:

D7939 Densifier improves with age. Unlike most coatings, paints, or sealers, **D7939 Densifier** floors look better, not worse, as they age. The beauty and protection of **D7939 Densifier** wears in—not off. When first applied, **D7939 Densifier** begins a complex chemical process that converts elements present in the concrete to produce a denser, stronger, more beautiful floor. This densification process takes place primarily during the first two to six months. It then continues indefinitely over the life of the floor, at a diminishing rate. During the first six months you can speed this process by simply washing the floor. Scrubbing with water intensifies and accelerates this conversion process and is the single most important thing you can do to maximize the long-term benefits.

Your **D7939 Densifier** floor will continue to densify. Rapidly at first, then more slowly as the concrete ages. As the floor continues to densify, it becomes more beautiful and your cleaning time will decrease. Oil and other contaminants will find it more and more difficult to penetrate the treated floor. **D7939 Densifier** will not wash off, so wash as often as you like. The more frequently you wash the floor, the better it will look.

The Single, Most Important Thing You Can Do Now... Wash It!

Jay Barstow
REDFORD Corporation
www.redfordcorporation.com

REDFORD Corporation **D7939** Concrete Densifier and Waterproofer

1075 Kingwood Drive • Kingwood, Texas 77339 • (281) 358-4100

PRODUCT DESCRIPTION:
D7939 is a one component water based silicate and lithium based solution designed to densify and add waterproofing characteristics to concrete and concrete substrates. The densifier reacts with the cementitious ingredients to densify and add water repellency while allowing deep penetration to chemically harden and fortify the substrate. After the chemical reaction occurs, the substrate will be more abrasion resistant and help protect the surface from wear, moisture and efflorescence while remaining breathable.

BENEFITS OF USE:
Concrete sidewalks, drives or floors:
Increases durability by improving resistance to freeze/thaw effects and improves abrasion resistance and durability. Improves weathering, densifies and reduces efflorescence of natural stone, precast stone and cement. Protects and fortifies concrete as it seals against moisture damage. Application will reduce dusting and increase concrete life. Reduces water absorption into the substrate.

VOLATILE ORGANIC CONTENT:
Water based material with no VOC's.
COLOR:
Clear to very opaque color

RECOMMENDED FILM THICKNESS:
Apply until surface is saturated without puddles. Can be applied by any suitable method such as spraying or mopping etc.

COVERAGE PER GALLON:
When the surface is fully saturated, coverage will depend on the absorptivity of the substrate resulting in 100 to 400 square feet per gallon coverage.

PACKAGING INFORMATION:
This product is available in 5 gallon and 50 gallon containers (approximately 8.5 pounds/gallon).

SHelf LIFE:
One year in unopened containers when stored between 50-80 degrees F.

FINISH CHARACTERISTICS:
Normally, this product does not change the overall appearance of the substrate. After the material is applied and allowed to dry for 24 hours, it will not be readily apparent that the application has occurred except the concrete will be fortified and strengthened.

ABRASION RESISTANCE:
The application of this product will increase the abrasion resistance of most substrates. Results will vary according to substrate type.

ADHESION:
Because this material becomes an integral part of the surface that is treated and does not form an impermeable barrier, delamination does not occur.

DOT CLASSIFICATION:
Not regulated

VELOCITY:
Less than 25 mph

CRS (SCHEDULE 10):
Allow the material to dry for a 24 hour period of time to obtain the maximum benefits of the application. This allows the material to react with the concrete and become an integral part of the substrate.

APPLICATION TEMPERATURE:
55-90 degrees F. When properly used, this product can reduce water absorption while still maintaining greater than 90% breathability.

PREMER:
None required. If applying multiple coats, a wet edge should be maintained. If the D7939 dries between applications, water spotting may result.

TURBOKIT:
None required. Multiple coats of this product are compatible (see information under primer).

LIMITATIONS:
The floor must be dry prior to application but there should be no standing water or puddles. The best application would be with a dry substrate. Remove all coverings before drying from all glass or metal surfaces as this product can catch the surface. Under certain conditions, a precipitate may be deposited on the lithium solution dries. Substrates with a high acid level will react with the lithium solution and emit some acid neutralization of the material before it is absorbed into the surface forming a white precipitate. This white precipitate is more readily noticeable on darker concrete and substrates. A test should be made to determine that none of these conditions exist. The substrate can be damp prior to application but there should be no standing water or puddles.

INSTRUCTIONS

PRODUCT STORAGE: Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be between 50 and 90 degrees F. Keep from freezing.

STORAGE PREPARATIONS: All dirt, oil, dust, foreign contaminants and lint must be removed to assure a trouble free application. Under certain conditions, a precipitate may be deposited on the lithium solution dries. Substrates with a high acid level will react with the lithium solution and emit some acid neutralization of the material before it is absorbed into the surface forming a white precipitate. This white precipitate is more readily noticeable on darker concrete and substrates. A test should be made to determine that none of these conditions exist. The substrate can be damp prior to application but there should be no standing water or puddles.

PRODUCT APPLICATION: See material before using. Apply material to the horizontal surface without tamping with a broom, mop or spraying equipment. When applying the material, always maintain a wet edge as this will reduce any chance of water spotting. When spraying, this product can damage vegetation, stain on such glass, aluminum, metal and plastic. If contamination does occur, rinse off with water immediately. If a white precipitate should form due to high acid content, or second coating, mixing with water and a stiff broom will usually be able to remove the spotting. Since D7939 densifier does not really seal pores, water can still evaporate from the underlying surface. However, if capillary water is traveling toward the treated face, some of it will be stopped by the depth to which the D7939 has penetrated. At this point it will evaporate, passing through the treated area as water vapor. This normally will present no problem. However, if the capillary water source contains soluble salts, they will be deposited at this point within the substrate where this water evaporates. In concrete, this reduces visible efflorescence but is no danger. If capillary water deposits excessive amounts of soluble salts, their crystalline growth can develop sufficient pressure resulting in spalling. Spalling may also result from additional pressure of water freezing behind the face of the surface before evaporation can occur. These conditions both develop from outside sources of water. This product is developed to prevent the migration of water beneath the treated surface while still allowing water vapor to escape. Application of this material will prevent positive salt absorption of water and improve the capability of the substrate to resist spalling. Although the material will strengthen the substrate, outside sources of water may cause problems if the hydrostatic pressure is sufficiently great. After the product has been in contact with the substrate to allow for penetration and reaction, excess material can be removed by water or allowed to dry.

RECOAT OR TOP COATING: Normally one coat is all that is required. It is best to make a second pass when desired while the substrate is still wet. Avoid overapplying wet to wet as this causes water spotting because the product will not be able to penetrate a dry area that was treated as well as in an area that has been treated but not yet dried.

CLEANUP: Use any suitable mild detergent with a neutral pH to slightly alkaline pH and water.

FLOOR CLEANING: Caution! Although very unlikely, some cleaners may affect the color of the treated surface. Test each cleaner in a small area, utilizing your cleaning technique. If it effects are noted, you can continue to clean with the product and prevent tested.

RESTRICTIONS: Restrict the use of the floor to light traffic and non-hazard chemicals 24 hours has passed. Keep the floor dry for the period including the application of the product and finishing.

NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY
We warrant that our products are manufactured to meet quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our products for your particular purposes. Limitations on our warranty shall be contained in our specifications. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, REGARDING SUCH OTHER INFORMATION. THE DATE ON WHICH IT IS MADE OR THE DATE OF OUR ORGANIZATION OR USE OF OUR WARRANTY, COPIES OR IMPRINTS, THAT OUR PRODUCT SHALL BE MERCHANTABILITY OR THAT OUR PRODUCT SHALL BE FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY IS MADE THAT THE USE OF OUR PRODUCTS OR OUR PRODUCTS WILL NOT INFRINGE UPON ANY PATENT. We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement cost of our product, or the cost of replacement of our product, whichever is less. No representation or warranty is made as to other liability or use of our products. Our products contain chemicals that are CAUSE SERIOUS PHYSICAL HARM. BEFORE USING, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM.